Montana Department of Transportation

2004
Seal Coat Warranty Administration Guide

Montana Department of Transportation

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Introduction

The purpose of this guide is to present guidelines for the evaluation of the finished Seal Coat. This guide presents examples of desirable Seal Coat appearance and acceptable longitudinal joint location as well as unacceptable conditions, which include tracking, flushing, bleeding, equipment damage to seal coat, and chip loss. An emphasis is placed on recommended solutions in cases where unacceptable conditions exist.

2006 Edition – Second Printing

The changes to this version are listed below.

Page 4	Replaced 409.03.6	with	409.03.7
Page 5	Replaced 409.03.7 A	with	409.03.9
Page 6	Replaced 409.03.7 A	with	409.03.9
Page 7	Replaced 409.03.7 A	with	409.03.9
Page 8	Replaced 409.03.7 A	with	409.03.9
Page 9	Replaced 409.03.7 A	with	409.03.9
Page 10	Replaced 409.03.7 A	with	409.03.9
Page 11	Replaced 409.03.7 A	with	409.03.9
Page 12	Replaced 409.03.7 A	with	409.03.9
Page 13	Replaced 409.03.7	with	409.03.8
Page 14	Replaced 409.03.7	with	409.03.8
Page 15	Replaced 409.03.7	with	409.03.8
Page 16	Replaced 409.03.6	with	409.03.7

Condition: Desired Final Appearance

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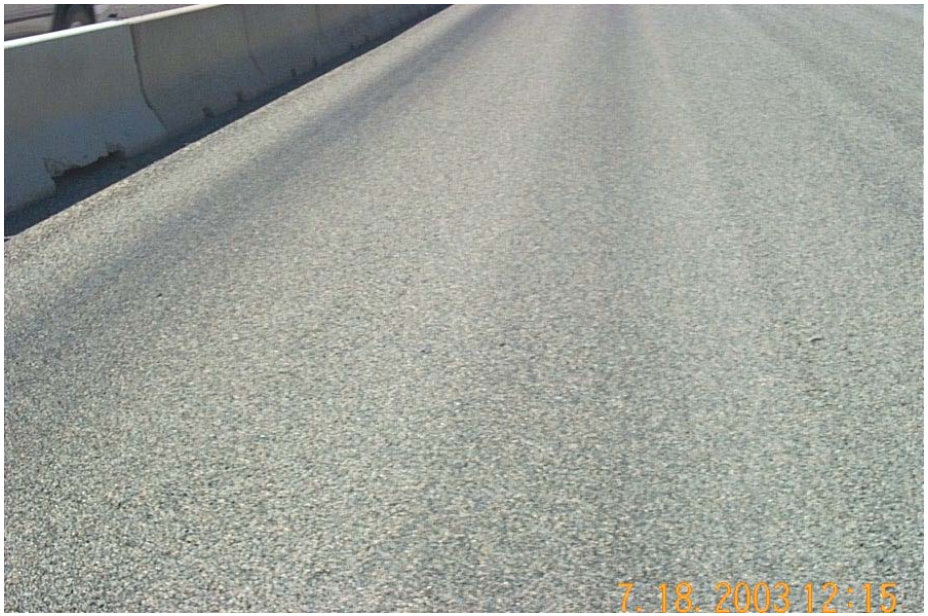
Condition: Acceptable Longitudinal Joint Location

Comments: As Per Section 409.03.7 Application of Seal Coat Materials, Keep Meet Lines to a Minimum. Locate Longitudinal Joints Outside The Wheel Path(s).

Condition: Light Tracking



Recommended Solutions:

- Move Traffic Control Devices as Needed Keeping Vehicle Tires Off of Oil Tracking Areas.
- Apply Blotter Material on Live Oil Areas For Duration of Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.

Condition: Light Tracking at Intersection

Recommended Solutions:

- Blot Live Oil Areas Throughout Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.
- This Level of Tracking is Considered Acceptable And is Expected to Diminish With Cooler Temperatures.

Condition: Moderate Tracking

Recommended Solutions:

- Move Traffic Control Devices as Needed Keeping Vehicle Tires Off of Oil Tracking Areas.
- Apply Blotter Material on Live Oil Areas For Duration of Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.

Condition: Moderate Tracking

Recommended Solutions:

- Move Traffic Control Devices as Needed to Keep Vehicle Tires Off of Oil Tracking Areas.
- Apply Blotter Material on Live Oil Areas For Duration of Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.

Condition: Heavy Tracking in Curve Section

Recommended Solutions:

- Blot Live Oil Areas Throughout Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.
- In Cases Where This Condition Persists at The End of The Warranty Period, Acceptance is Made Under Standard Specification Section 105.03.1.
- Due to The Loss of Service Life, Skid Resistance and Headlight Reflectivity, Recommend 50% Price Reduction be Applied to Affected Area.

- During Seal Coat Placement in High ADT And/or Turning Movement Areas, Consider Reducing Traffic Speeds And Continually Monitor Device Placement (i.e. Flagging Station Locations), to Avoid Aggregate Rollover During Curing Period.

Condition: Heavy Tracking, Bleeding

Recommended Solutions:

- Blot Live Oil Areas Throughout Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.
- In Cases Where This Condition Persists at The End of The Warranty Period, Acceptance is Made Under Standard Specification Section 105.03.1.
- Due to The Loss of Service Life, Skid Resistance and Headlight Reflectivity, Recommend 50% Price Reduction be Applied to Affected Area.

- During Seal Coat Placement in High ADT And/or Turning Movement Areas, Consider Reducing Traffic Speeds And Continually Monitor Device Placement (i.e. Flagging Station Locations) to Avoid Aggregate Rollover During Curing Period

Condition: Heavy Tracking, Bleeding

Recommended Solutions:

- Blot Live Oil Areas Throughout Warranty Period. Refer to Section 409.03.9. Application of Blotter Material;
- In Cases Where This Condition Persists at The End of The Warranty Period, Acceptance is Made Under Standard Specification Section 105.03.1.
- Due to The Loss of Service Life, Skid Resistance and Headlight Reflectivity, Recommend 50% Price Reduction be Applied to Affected Area.

- During Seal Coat Placement in High ADT And/or Turning Movement Areas, Consider Reducing Traffic Speeds And Continually Monitor Device Placement (i.e. Flagging Station Locations) to Avoid Aggregate Rollover During Curing Period.

Condition: Flushing, Excess Bituminous Material

Recommended Solutions:

- Decrease Bituminous Material Application Rate;
- Increase Cover Material Application Rate;
- ***** Reduce The Amount of Water Applied to Cover Material;
- Modify Aggregate Wetting Method to More Uniformly Distribute Water;
- Blot Live Oil Areas Throughout Warranty Period. Refer to Section 409.03.9. Application of Blotter Material.

- ***** This Condition Typically Occurs When Cover Material is Saturated to The Point Where Free Water Runs From The Bed of The End Dump at The Chip Spreader. Bituminous Materials Are Then Drawn to The Surface by Seal Coat Equipment Tires.

Condition: Equipment Damage, Unacceptable Appearance

Recommended Solutions:

- Clean Surface, Patch Bare Areas With Additional Bituminous Material And Cover Aggregate;
- As Per Section 409.03.8 Warranty, Submit a Detailed Repair Plan to The EPM For Approval;
- Turning Movements Resulting in Damage of This Severity Should Not Occur at Any Time During The Curing Period.

Condition: Chip Loss

Recommended Solutions:

- As Per Section 409.03.8 Warranty, Submit a Detailed Repair Plan to The Project Manager For Approval Before Performing Warranty Repairs;
- This Condition is Unacceptable And Must be Repaired Prior to Final Acceptance.

Condition: Chip Loss

Recommended Solutions:

- As Per Section 409.03.8 Warranty, Submit a Detailed Repair Plan to The Project Manager For Approval Before Performing Warranty Repairs;
- This Condition is Unacceptable And Must be Repaired Prior to Final Acceptance.

Condition: Acceptable Appearance After Repairs

Comments:

- Aggregate Colors Are Uniform, Longitudinal Joints Match Reasonably;
- As Per Section 409.03.7 Application of Seal Coat Materials, Ensure That Transverse And Longitudinal Joints Are Smooth And Match Adjacent Surfaces.

Example- Seal Coat Warranty Deduction Calculation

This example relates to the photos shown on page 11 of the Seal Coat Warranty Administration Guide.

Given:

- Area affected- 3,030 M^2
- Emulsified asphalt price- $270.00/ MT;
- Specific gravity of asphalt- 1.01745 kg/liter
- Application rate of bituminous material- 1.8 liters/ M^2;
- Cover material price- $0.30/ M^2

Asphalt:

3,030 M^2 * 1.8 liters/M^2 = 5,454 liters;
5,454 liters * 1.01745 kg/liter = 5,549 kg or 5.55 MT;
5.55 MT * $270.00/ MT= $1,498.50

Cover Material:

3,030 M^2 * $0.30/ M^2 = $909.00

Total Materials- $2,407.50

In this case, the recommended 50% price reduction would total **$1203.75**

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